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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,561	01/17/2001	Kareem I. Batarseh	3731-002	5927

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Warrenton, VA 20186

EXAMINER

CHOI, FRANK I

ART UNIT	PAPER NUMBER
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1616

DATE MAILED: 01/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/761,561

Applicant(s)

BATARSEH ET AL.

Examiner

Frank I Choi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-16 and 18-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-16 and 18-30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>g</u> . | 6) <input type="checkbox"/> Other: . |

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DETAILED ACTION

Terminal Disclaimer

The terminal disclaimer filed on 10/7/2002 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Pat. 6,242,009 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Examiner has duly considered Applicant's arguments but deems them unpersuasive.

Claim 28 is indefinite as it is uncertain how it can be determined that a given complex exhibits structural spectra as shown in Figs. 1,2,3 or combinations thereof or how the figures can be combined. Applicant argues that limitations drawn to a chart or a diagram do not inherently conflict with the second paragraph of Section 112. However, Examiner has set forth reasons as above. The figures are so small that they are impossible to read and Applicant has not shown how it is possible to combine one or more of the figures.

Claim Rejections - 35 USC § 102/103

Examiner notes that any rejection recited below is not intended to apply to subject matter which was allowed and issued as U.S. Pat. 6,242,009.

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 8, 11, 13, 16, 18, 21, 22, 28 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Poddymov et al. (1977) or Sanchez et al. (1981) (English translations of each).

Poddymov et al. or Sanchez et al. teach method of chelating silver with amino acids in acidic conditions at room temperature (See entire documents).

Alternatively, at the very least the claimed invention is rendered obvious within the meaning of 35 USC 103, because the prior art discloses products and use that contain the same exact ingredients/components as that of the claimed invention. See *In re May*, 197 USPQ 601, 607 (CCPA 1978). See also *Ex parte Novitski*, 26 USPQ2d 1389, 1390-91 (Bd Pat. App. & Inter. 1993).

Examiner has duly considered Applicant's arguments but deems them unpersuasive.

In response to applicant's argument that Poddymov et al. or Sanchez et al. do not teach or suggest that these complexes are to be used as bactericides, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and

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the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Further, with respect to disinfectant, the prior art contains mixtures of the chelates and since disinfectant is not defined by the claim said mixture appears to fall within the scope of the claim. Also, Examiner has not combined the references in making the rejection. Finally, since Applicant has asserted that the claimed compositions exhibit the spectra set forth in claim 28, Examiner additionally rejects claim 28 herein.

Claims 1-4, 7-16, 18-29, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gamori et al. in view of Tsivion, Ackermann et al., Tumanov et al., Khurshid, Yamashita et al., Ali-Mohamed et al, Kawada et al., Modak et al., Goodman and Gilman's and Poddymov et al. (1977) (English translation) and Sanchez et al. (1981) (English translation).

Gomori teaches a composition containing silver salts or colloidal silver in an organic stabilizer which is effective as a disinfectant (Column 2, lines 15-65, Column 4, lines 14-22, 46-60).

Tsivion teaches that copper, manganese and zinc ions are known to have antifungal properties and chelates of the same are known in the art (Pg. 1, lines 19-26). It is taught that aluminum and/or zinc chelates of citric acid or glycine are suitable as antibacterial/antifungal agents (Pg. 2, lines 6-26, Pg. 5, lines 5-16, Pgs. 6,7).

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Ackermann et al. teach that di- or trivalent metal ions, for example, copper, zinc, manganese, cobalt and nickel, chelated with phenylalanine have fungicidal activity (Abstract).

Tumanov et al. teach that copper complexes with alpha-amino acids have antimicrobial activity (Abstract).

Khurshid teach that zinc complexes of alanine, arginine, glycine, histidine, phenylalanine, lysine, threonine, tryptophan and leucine have antibacterial activity (Abstract).

Yamashita et al. teach that antibacterial metals, silver, copper, and zinc, chelated with long-chain acyl basic amino acids, such as lysine and arginine, have both antibacterial and surface activities (Abstract).

Ali-Mohamed et al. teach that cobalt chelated with glycine, alanine or valine has antibacterial activity (Abstract).

Kowada et al. teach that copper chelated with methionine or pentocystine is effective as a bactericidal/fungicidal agent (Abstract).

Modak et al. teaches that antimicrobial agents such as chlorhexidine, and other synergistic agents such as are described in Goodman and Gilman's, The Pharmacological Basis of Therapeutics, act synergistically with zinc and silver (Column 4, lines 46-68, Column 5, lines 1-29, Column 8, lines 48-68, Column 9, lines 1-22).

Goodman and Gilman's teach that isopropanol is used as a vehicle for other germicidal compounds, such as chlorhexidine, and that it increases their efficacies (Pgs. 962,963).

Poddymov et al. (1977) and Sanchez et al. (1981) teach methods of preparing silver chelates of amino acids in room temperature in acidic conditions (See entire documents).

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The difference between the prior art and the claimed invention is that the prior art does not expressly disclose an antimicrobial composition which comprises an antimicrobial metal ion chelated with an amino acid in combination with another antimicrobial agent, such as chlorhexidine, isopropanol or hydrogen peroxide. However, the prior art amply suggests the same as it is known in the art to formulate antimicrobial compositions comprising metal chelates with amino acids and that antimicrobial agents, such as hydrogen peroxide, chlorhexidine and isopropanol, may be synergistically combined with antimicrobial metal ions and/or their metal chelates. It would have been well within the skill of and one of ordinary skill in the art would have been motivated to modify the prior art as above with the expectation that metal ions chelated with alpha-amino acids would be effective antimicrobial agents, and that the the further addition of chlorhexidine, hydrogen peroxide, or isopropanol would have a synergistic effect with the metal chelate. Further, methods of preparing complexes are known in the art as such it would have been well within the skill of one of ordinary skill in the art to prepare chelates, including as prepared in the present invention.

Examiner has duly considered Applicant's arguments but deems them unpersuasive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Further, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any

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one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Applicant argues that one of ordinary skill in the art would be motivated to modify the references as above. However, as indicated above, there is motivation to combine the references and that different products are formed at different pH's is clearly taught by Paddymov et al. and Sanchez et al. Applicant uses a known alternative process to create metal chelates. Metal chelates are known to have biocidal activity. One of ordinary skill in the art would be motivated to combined products having biocidal activity to increase the spectrum and/or strength of said biocidal activity. Finally, since Applicant has asserted that the claimed compositions exhibit the spectra set forth in claim 28, Examiner additionally rejects claim 28 herein.

Therefore, the claimed invention, as a whole, would *have prima facie* obvious to one of ordinary skill in the art, because every element of the invention has been collectively taught by the combined teachings of the references.

Conclusion

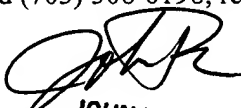
A facsimile center has been established in Technology Center 1600. The hours of operation are Monday through Friday, 8:45 AM to 4:45 PM. The telecopier numbers for accessing the facsimile machines are (703) 308-4556 or (703) 305-3592.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Choi whose telephone number is (703) 308-0067. Examiner maintains a flexible schedule. However, Examiner may generally be reached Monday-Friday, 8:00 am – 5:30 pm (EST), except the first Friday of the each biweek which is Examiner's normally scheduled day off.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. José Dees, can be reached on (703) 308-4628. Additionally, Technology Center 1600's Receptionist and Customer Service can be reached at (703) 308-1235 and (703) 308-0198, respectively.

FIC

January 13, 2003


JOHN PAK
PRIMARY EXAMINER
GROUP 1600

